CDC Light Trap Procedures

(Modified from Virginia Arbovirus Surveillance Response Plan, 2004)

For special surveillance of short duration, the dry ice baited CDC trap is an efficient, reliable surveillance tool for mosquito surveillance. This trap can be used to check the success of an adulticide or gather arbovirus information. The CDC trap's portability, battery power, and efficiency add versatility to the surveillance program.

The following guidelines are offered to minimize variability in the use of CDC traps.

1. Whenever possible, use the CDC trap with a dry ice supplement. A quantity of 2.0 to 2.5 lbs. of pelletized or block dry ice in an insulated container (2 quart cooler) will mimic a large mammal's respiration and last long enough to cover the usual mid-afternoon to dawn period.

2. If the capture of non-mosquito insect species is a problem, remove the light source when dry ice is used as an attractant; the absence of light will eliminate other photopositive insects from the collection, increasing the efficiency of identification. It will also make the trap less visible to vandals and thieves.

3. Hang the dry ice directly above, or adjacent to - and slightly below, the lid of the CDC trap to draw mosquitoes as close as possible to the collection fan.

4. Set trap at least one hour prior to dusk until one hour after dawn to insure that surveillance is conducted during the primary host-seeking periods for most species. Setting traps earlier in the afternoon helps capture day-biting species.

5. Hang the trap so its light is 5-6 ft from ground level unless specific information is needed on canopy dwellers. For most species, this height will provide a reliable indication of activity.

6. Try to set the traps along the edges of habitats to increase trapping efficiency. A trap located strictly in one ecosystem/habitat may exclude certain species; trapping along the edge of a swamp, for example, will provide a picture of those species found not only in the swamp, but also in the nearby upland.

7. Consider two traps as the minimum number per site in most situations and compare your data to detect differences that may have been due to outside influences.

8. Be aware that differences do exist in the host seeking behavior of some species and that alterations from these general guidelines may be necessary to get complete surveillance data. Strictly daylight feeding species will not be accurately represented in dusk-dawn collections. A species that host seeks in tree canopies will not be accurately sampled by a trap that is suspended 5 ft from the ground. Whenever possible, become familiar with the host seeking habits of the mosquitoes being surveyed.